

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

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NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY

(PCT Rule 71.1)

Date: 9/11/05

Date of mailing
(day/month/year)

08.11.2005

Applicant's or agent's file reference
E1043.WO

IMPORTANT NOTIFICATION

International application No.
PCT/GB2004/003566

International filing date (day/month/year)
19.08.2004

Priority date (day/month/year)
19.08.2003

Applicant
PLEXTEK LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the International
preliminary examining authority:





European Patent Office - P.B. 5818 Patentlaan 2
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PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference E1043.WO	FOR FURTHER ACTION		See Form PCT/PEA416
International application No. PCTGB2004/003566	International filing date (day/month/year) 19.08.2004	Priority date (day/month/year) 19.08.2003	
International Patent Classification (IPC) or national classification and IPC H04B5/00, G01S11/06			
Applicant PLEXTEK LIMITED et al.			
<p>1. This report is the International preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 9 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 11.03.2005		Date of completion of this report 08.11.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tlx 31 651 epo nl Fax +31 70 340 - 3016		Authorized Officer Lopez Marquez, T Telephone No. +31 70 340-4087 	

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INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITYInternational application No.
PCT/GB2004/003566

IAP20050301 16 FEB 2006

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1, 2, 4-20 as originally filed
 3, 3a received on 15.06.2005 with letter of 13.06.2005

Claims, Numbers

1-35 received on 15.06.2005 with letter of 13.06.2005

Drawings, Sheets

1/8-8/8 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 24-35

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 24-35

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See separate sheet for further details

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Box No. IV Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees, the applicant has:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
 - ☐ not complied with for the following reasons:
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-23 .

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-23
	No: Claims	
Inventive step (IS)	Yes: Claims	1-23
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-23
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: US 2002/140419 A1 (DURET DENIS) 3 October 2002 (2002-10-03)

- 1.1 The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document): a radio frequency receiver for use in a proximity detecting system, the radio frequency receiver comprising at least one antenna coil operable to receive radio frequency signals; a signal processor arranged to amplify and filter signals received by the radio frequency receiver; and a processing system arranged to evaluate a amplitude associated with each antenna coil, the processing system being arranged to evaluate a displacement of the receiver with respect to the transmitter on the basis of the evaluated amplitude (abstract; page 1, paragraphs 9 to 21; page 2, paragraphs 32 and 33).
- 1.2 The subject-matter of claim 1 differs from this known receiver in that it further comprises a tunable receiver circuitry arranged in cooperative association with the antenna coil and arranged to modify the frequency at which radio signals are received by the radio frequency receiver; the signal strength associated with each antenna coil is evaluated; the distance between the transmitter and the receiver is evaluated on the basis of the signal strengths; and the received and processed signals are of frequencies between 100kHz and 10MHz.
- 1.3 The subject-matter of claim 1 is therefore new (Article 33(2) PCT).
- 1.4 The problem to be solved by the present invention may be regarded as providing a radio frequency receiver capable of accurately determining the distance between transmitter and receiver within 10mm. By working within the 100kHz - 10MHz range of operation, this is within the near field of the transmitter, the signal strength is proportional to the inverse cube of the distance, allowing the distance to be accurately identified.

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- 1.5 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT).
- 1.6 Claims 2 to 15 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
- 2.1 The document D1 also shows: a frequency radio receiver for use in a proximity detecting system, the radio frequency receiver comprising antenna coils being operable to receive radio frequency signals at frequencies less than 10 MHz; a signal processor arranged to amplify and filter signals received by the radio frequency receiver (abstract; page 1, paragraphs 9 to 21; page 2, paragraphs 32 and 33).
- 2.2 The subject-matter of claim 16 differs from this known receiver in that it further comprises a tunable receiver circuitry arranged in cooperative association with the antenna coil and arranged to modify the frequency at which radio signals are received by the radio frequency receiver; and frequency sequence identifying means arranged to identify, within a time period, a sequence of frequencies in the amplified and filtered signals.
- 2.3 The subject-matter of claim 16 is therefore new (Article 33(2) PCT).
- 2.4 The problem to be solved by the present invention may be regarded as providing a radio frequency receiver capable of eliminating noise and interferences, which a receiver operating at such low frequencies is likely to receive in addition to the signals emanating from the transmitter. The receiver of claim 16 is configured to identify a frequency hopping pattern used by the transmitter and to process the signals received according to the identified frequency hopping pattern.
- 2.5 The solution to this problem proposed in claim 16 of the present application is considered as involving an inventive step (Article 33(3) PCT).
- 2.6 Claims 17 to 23 are dependent on claim 16 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

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3. Parts of the description relating to the non searched second invention and claims 24 to 35 should be excised from the application.